

IN THE CLAIMS

Please cancel claims 7-8, 11, 13, 17, 22, 37, and 49 without prejudice.

Please amend the following of the claims which are pending in the present application:

1. (Currently amended) A method for fabrication of a light emitting device on substrate, the light emitting device having a wafer with multiple epitaxial layers and a first ohmic contact layer on the epitaxial layers remote from the substrate; the method including ~~the steps~~:

- (a) applying to the ohmic first contact layer a seed layer of a thermally conductive metal;
- (b) electroplating a relatively thick layer of the thermally conductive metal on the seed layer; and
- (c) removing the substrate.

2. (Original) A method as claimed in claim 1, wherein the first ohmic contact layer is coated with an adhesion layer prior to application of the seed layer.

3. (Currently amended) A method as claimed in claim 1 ~~or claim 2~~, wherein the seed layer is patterned with photoresist patterns before the electroplating step (b).

4. (Original) A method as claimed in claim 3, wherein the electroplating of the relatively thick layer is between the photoresist patterns.

5. (Currently amended) A method as claimed in ~~any one of claims 1 to 4~~ claim 1, wherein between steps (b) and (c) there is performed the additional step of annealing the wafer to improve adhesion.

6. (Currently amended) A method as claimed in claim 3 or ~~claim 4~~, wherein the photoresist patterns are of a height of at least 50 micrometers, a thickness in the range of 3 to 500 micrometers, and a spacing of 300 micrometers.

7-8. (Cancelled)

9. (Currently amended) A method as claimed in ~~any one of claims 1 to 8~~ claim 1, wherein the seed layer is electroplated in step (b) without patterning, patterning being performed subsequently.

10. (Currently amended) A method as claimed in claim 9, wherein patterning is by photoresist patterning and then wet etching, or by laser beam micro-machining of the relatively thick layer.

11. (Cancelled)

12. (Currently amended) A method as claimed in ~~any one of claims 3 to 11~~  
claim 3, wherein the relatively thick layer is of a height no greater [[that]] than the  
photoresist height, or is electroplated to a height greater than the photoresist and  
is subsequently thinned.

13. (Cancelled)

14. (Currently amended) A method as claimed in claim [[13]] 12, wherein  
thinning is by polishing.

15. (Currently amended) A method as claimed in ~~any one of claims 1 to 14~~  
claim 1, wherein after step (c) there is included an extra step of forming on a  
second surface of the epitaxial layers a second ohmic contact layer, the second  
ohmic contact layer being selected from the group consisting of: opaque,  
transparent, and semi-transparent.

16. (Currently amended) A method as claimed in claim 15, wherein the second  
ohmic contact layer is one of blank and patterned, wherein bonding pads are  
formed on the second ohmic contact layer.

17. (Cancelled)

18. (Currently amended) A method as claimed in ~~any one of claims 1 to 14~~  
claim 1, wherein after step (c) ohmic contact formation and subsequent process  
steps are carried out, the subsequent process steps including deposition of wire  
bond pads.

19. (Original) A method as claimed in claim 18, wherein the exposed epitaxial  
layer is cleaned and etched before the second ohmic contact layer is deposited.

20. (Currently amended) A method as claimed in ~~any one of claims 15 to 19~~  
claim 15, wherein the second ohmic contact layer does not cover the whole area of  
the second surface of the epitaxial layers.

21. (Currently amended) A method as claimed in ~~any one of claims 15 to 20~~  
claim 15, wherein after forming the second ohmic contact layer there is included  
testing of the light emitting devices on the wafer, and separating the wafer into  
individual devices.

22. (Cancelled)

23. (Currently amended) A method as claimed in ~~any one of claims 1 to 22~~  
claim 1, wherein the light emitting devices are fabricated without one or more

selected from the group consisting of: lapping, polishing and dicing.

24. (Currently amended) A method as claimed in ~~any one of claims 1 to 23~~  
claim 1, wherein the first ohmic contact layers are on p-type layers of the epitaxial  
layers.

25. (Currently amended) A method as claimed in ~~any one of claims 15 to 22~~  
claim 15, wherein the second ohmic contact layer is formed on n-type layers of the  
epitaxial layers.

26. (Currently amended) A method as claimed in ~~any one of claims 1 to 14~~  
claim 1, wherein after step (c), dielectric films are deposited on the epitaxial layers  
and openings are cut in the dielectric films and second ohmic contact layers and  
bond pads deposited on the epitaxial layers.

27. (Currently amended) A method as claimed in ~~any one of claims 1 to 14~~  
claim 1, wherein after step (c), electroplating of a thermally conductive metal on  
the epitaxial layers is performed.

28. (Currently amended) A method as claimed in ~~any one of claims 1 to 27~~  
claim 1, wherein the thermally conductive metal comprises copper and the  
epitaxial layers comprise multiple GaN-related layers.

29. (Currently amended) A light emitting diode fabricated by the method of ~~any one of claims 1 to 28~~ claim 1.

30. (Currently amended) A laser diode fabricated by the method of ~~any one of claims 1 to 28~~ claim 1.

31. (Original) A light emitting device comprising epitaxial layers, a first ohmic contact layer on a first surface of the epitaxial layers, a relatively thick layer of a thermally conductive metal on the first ohmic contact layer, and a second ohmic contact layer on a second surface of the epitaxial layers; the relatively thick layer being applied by electroplating.

32. (Original) A light emitting device as claimed in claim 31, wherein there is an adhesive layer on the first ohmic contact layer between the first ohmic contact layer and the relatively thick layer.

33. (Original) A light emitting device as claimed in claim 32, wherein there is a seed layer of the thermally conductive metal between the adhesive layer and the relatively thick layer.

34. (Currently amended) A light emitting device as claimed in ~~any one of~~

~~claims 31 to 33~~ claim 31, wherein the relatively thick layer is at least 50 micrometers thick.

35. (Currently amended) A light emitting device as claimed in ~~any one of~~ ~~claims 31 to 34~~ claim 31, wherein the second ohmic contact layer is a thin layer in the range of from 3 to 500 nanometers.

36. (Currently amended) A light emitting device as claimed in ~~any one of~~ ~~claims 31 to 35~~ claim 31, wherein the second ohmic contact layer is selected from the group consisting of: opaque, transparent, and semi-transparent, and includes bonding pads.

37. (Cancelled)

38. (Currently amended) A light emitting device as claimed in ~~any one of~~ ~~claims 31 to 37~~ claim 31, wherein the thermally conductive metal is copper and the epitaxial layers comprise multiple GaN-related epitaxial layers.

39. (Currently amended) A light emitting device as claimed ~~any one of claims 31 to 38~~ claim 31, wherein the light emitting device is selected from the group consisting of: a light emitting diode, and a laser diode.

40. (Currently amended) A light emitting device as claimed ~~any one of claims 31 to 39~~ claim 31, wherein the first ohmic contact layer, at its interface with the epitaxial layers, is a mirror.

41. (Original) A light emitting device comprising epitaxial layers, a first ohmic contact layer on a first surface of the epitaxial layers, an adhesive layer on the first ohmic contact layer, a seed layer of a thermally conductive metal on the adhesive layer, and a relatively thick layer of the thermally conductive metal on seed layer; the first ohmic contact layer, at its interface with the epitaxial layers, is a mirror.

42. (Original) A light emitting device as claimed in claim 41, wherein the relatively thick layer is one or more selected from the group consisting of: a heat sink, an electrical connector, and a mechanical support.

43. (Currently amended) A light emitting device as claimed in claim 41 or ~~claim 42~~, further ~~including~~ comprising a second ohmic contact layer on a second surface of the epitaxial layers[[]], the second ohmic contact layer being a thin layer in the range of from 3 to 500 nanometers.

44. (Currently amended) A light emitting device as claimed in ~~any one of claims 41 to 43~~ claim 41, wherein the second ohmic contact layer comprises bonding pads and is selected from the group consisting of: opaque, transparent,

and semi-transparent.

45. (Currently amended) A light emitting device as claimed ~~any one of claims 41 to 44~~ claim 41, wherein the thermally conductive metal comprises copper[.], and the epitaxial layers comprise GaN-related layers.

46. (Currently amended) A light emitting device as claimed in ~~any one of claims 41 to 45~~ claim 41, wherein the light emitting device is one of: a light emitting diode and a laser diode.

47. (Currently amended) A method of fabrication of a light emitting device, the method including ~~the steps~~:

(a) on a substrate with a wafer comprising multiple GaN-related epitaxial layers, forming a first ohmic contact layer on a first surface of the wafer;

(b) removing the substrate from the wafer; and

(c) forming a second ohmic contact layer on a second surface of the wafer, the second ohmic contact layer having bonding pads formed thereon.

48. (Currently amended) A method as claimed in claim 47, wherein the second ohmic contact layer is for light emission, and is selected from the group consisting of: opaque, transparent, and semi-transparent, the second ohmic contact layer being one of: blank, and patterned.

49. (Cancelled)

50. (Currently amended) A light emitting device fabricated by the method of  
~~any one of claims 47 to 49~~ claim 47.

51. (Original) A light emitting device as claimed in claim 50, wherein the light emitting device is selected from the group consisting of: a light emitting diode, and a laser diode.